Kenmore Park Infant & Nursery School.
Our COMPUTING – Curriculum Overview.

Intent	We want children to become confident, independent users of computing technologies. We want the use of technology to support learning across the entire curriculum and to ensure that our curriculum is accessible to every child and they are aware of the importance of on-line safety. Our intent is that pupils learn the key and broad learning objectives of the National Curriculum, which include: • knowing when to use technology (such as a computer or iPad to access the internet) safely & purposefully to create, organise, store, manipulate and retrieve digital content. • Create and debug simple programs (using programmable items such as Beebots/Turtles)
Implementation	We intend to teach through - Creative cross-curricular planning / schemes of work / appropriate resources
Impact	Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression and build on and embed current skills. Children become increasingly proficient on school equipment and have good, transferable knowledge and understanding of online safety which is transferred into their own lives. Through Busy Things, J2e and programmable toys, children have a broad base of transferable knowledge which can be used on other similar platforms. Pupil voice, subject monitoring and lesson observations all ensure a positive impact of computing as a subject.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery						
Unit/Topic						
Knowledge, skills and understanding I can…	Children recognise that a range of technology is used in places such as homes and schools such as computers, mobile phones, tablets, TVs and microwaves. They select and use technology for particular purposes such as tablets and toy phones and tills for imaginary play.					
Reception						
Unit/Topic	iPad skills / Painting	Programming	Solving problems	IPad skills / Painting	Mouse skills / Programming	Mouse skills / Solving problems
Knowledge, skills and understanding I can…	Expressive arts & design • Exploring & using media and materials. *E.g. Mark making and creating simple pictures using iPad*	Understanding: – • follow instructions with several ideas or actions. *E.g. programming a Beebot to move forward and backward.*	Mathematics Development: - • Solving problems. *Using apps such as White Rose 1-minute maths, Top Marks and Busy Things. Using*	Expressive arts & design • Exploring & using media and materials. *E.g. Mark making and creating simple pictures using iPad*	Understanding: – • follow instructions with several ideas or actions. *E.g. Using a computer to control an onscreen turtle.* Physical Development - • Moving and handling.	Mathematics Development: - • Solving problems. *E.g. Using relevant programmes on Busy things and Top marks.*

	whiteboard, Busy Things. • Being imaginative Physical Development - • Moving and handling. *E.g. iPads, toy phones, kettles, microwaves.*	Physical Development - • Moving and handling. *E.g. Using a Beebot safely and appropriately.*	*Beebots.*	*whiteboard, Busy Things.* • Being imaginative Physical Development - • Moving and handling. *E.g. iPads, toy phones, kettles, microwaves.*	*E.g. Using a mouse to move and control objects onscreen.*	
Key vocabulary:	Open, app, touch	Forward, backward, left, right, instruction, click drag		Open, app, touch, move, drag	Mouse, move, drag, instruction, control, click	Mouse, move, drag, instruction, control, click
Year 1	U 1.01	U 1.02	U 1.02	U 1.01	U 1.02	U.1.01
Unit/Topic	**Computer Skills**	**Painting**	*Word Processing*	**Programming Toys**	**Programming**	*Using and Applying*
National Curriculum	Use technology purposefully to manipulate and retrieve digital content. Use technology safely and respectfully.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Understand that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use technology purposefully to create digital content. Understand _how_ [algorithms] are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions Understand _what_ algorithms are and that programs execute by following precise and unambiguous instructions.	To understand that programs execute by following precise and unambiguous instructions. To use logical reasoning to predict the behaviour of simple programs. To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Knowledge, skills and understanding I can…	• use a computer mouse. • switch on and shutdown a computer. • launch an application. *E.g. Busy Things.* • save a file. • drag and drop objects. • use technology safely and appropriately. • keep personal information safe.	• paint with different colours. *(using Busy Things).* • paint with different brushes. • create shapes and fill areas. • make changes to improve my work. • add text to a painting.	• type on a keyboard. • type symbols and save files. • edit text. • use a keyboard effectively. • select and format text. • format the font.	• create instructions using pictures. • say why it is important to be precise when writing an algorithm / set of instructions. • write instructions to program a Beebot / online turtle to move. • debug an incorrect program on a Beebot. • program a sequence to make a Bee-Bot move.	• describe and use instructions to program a character on Busy Things. • program a character to grow and shrink. • use instructions to make characters move at different speeds and distance. • use a repeat instruction to make a sequence of instructions run more than once. • create programs with a sequence of linked instructions.	• demonstrate a range of basic skills to use a computer and its software. • type and format text, then save my work. • open saved work and edit text. • use shapes to create a particular image. • use different brush tools to create a particular image. • create text and pictures.
Key vocabulary:	mouse: click, button, double click, drag, pressure. Monitor, display, keyboard, mouse, headphones, switch. Launch, application, window, minimise, restore, size, move, screen, close, exit. Save, folder, open, file.	Paint, colour, brush. Tools, settings. Pixels shape, fill, Bucket. shape, fill, undo, redo text, size, poster, edit, change, select.	Keyboard, type, key, shift, space bar, enter, return. symbol, save, folder. backspace, delete, arrow key. enter key, undo, redo. select, format, bold, italics, underline font, size, colour	Algorithm, instruction, order, debug, program, turn, left, right, clockwise, anti-clockwise sequence	Algorithm, instruction, order, debug, program blocks, character, sequence, connect, repeat speed, size, move, predict, instructions.	
Year 2	U 2.01	U2.01	U 2.01	U 2.02	U 2.02	U2.01
Unit/Topic	**Computer Art**	**Using the Internet**	**Presentation Skills**	**Programming Turtles**	**Programming**	**Using and Applying**
National Curriculum	To use technology purposefully to create, organise, store, manipulate and retrieve digital content	To use technology safely, purposefully to retrieve digital content To use technology safely and respectfully, keeping personal information private;	Use technology safely and respectfully. Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Understand what algorithms are, and that programs execute by following precise and unambiguous instructions. Create and debug simple programs.	Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the	Use technology purposefully to create, organise, store, manipulate and retrieve digital content Understand what algorithms are; and that

					behaviour of simple programs	programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs in the context of using Scratch programming to create code.
		identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies Use technology safely and respectfully, keeping personal information private To use technology safely and respectfully and identify where to go for help and support when they have concerns about content or contact on the Internet		Use logical reasoning to predict the behaviour of simple programs		
Knowledge, skills and understanding **I can …**	• Create computer art using 2Simple/2Paint • Use a range of tools in a computer program. • Make and edit shapes. • Change the shade of a colour for effect. • Retrieve a file to edit in a computer program.	• search the Internet using one word. • stay safe when using the Internet using SMART. • search the Internet to find results suitable for children. • search for information safely online. • follow links to another web page. • follow links safely online. • create content for an online blog. • use a camera/iPad to take safe photos to use online. • use an online blog safely and respectfully.	• use basic iPad skills • organise ideas for a presentation. • create a simple presentation with text. • add and format an image. • reorder slides and present a presentation. • search for information.	• give and follow an algorithm (set of sequenced instructions) to turn right or left. • give and follow an algorithm to make half and quarter turns. • give and follow an algorithm using the commands right 90 and left 90. • give, follow and complete an algorithm. • use recognised language in an algorithm. • create, test and debug an algorithm.	• create an algorithm to move or rotate the turtle. • create an algorithm and use the repeat command (turtle). • create an algorithm and add sound. (Scratch) • create an algorithm and use the repeat and say command. (Scratch) • create an algorithm and use the green flag to start. (Scratch) • create an algorithm and use the commands to change the backdrop and add sprites. (Scratch)	• use a specific computer skill to reproduce a style of art. • use a specific computer skill to create and compare styles of art. • create a presentation including text and images. • retrieve, edit and organise a presentation. • create precise instructions for a character on a particular theme. • create code for a pair of characters involving speech and movement.

		• post positive comments and responses on a blog.				
Key vocabulary:	program, tool, size, colour. fill, straight lines, primary colours, red, yellow, blue, weight. shapes, manipulate, rotate, shade, lighter. Copy and Paste, portrait.	Internet, World Wide Web (WWW), search, search engine, results, Google, browser, results, link, web page, back, username, password, upload	monitor, switch, shut down, log on, log off, windows, folder, new folder Presentation New slide, layout, text box, format, font, colour, background, line. Image, picture, photo, insert, copy View, drag, present.	Algorithm, instruction, order, debug, program, turn, left, right, clockwise, anti-clockwise sequence	Block coding, Algorithm, instruction, order, debug, program, turn, left, right, clockwise, anti-clockwise sequence	
Next steps(Yr 3)	• Use a range of software for similar purposes.	• Collect information • Design and create content. • Present information. • Search for information on the web in different ways. • Manipulate and improve digital images.	• Discern where it is best to use technology and where it adds little or no value.	• Design a sequence of instructions including directional instructions	• Write programs that accomplish specific goals. • Work with various forms of input • Work with various forms of output.	• Use technology respectfully and responsibly. • Know different ways to get help if concerned. • Understand what computer networks do and how they provide multiple services. .